REMARKS

The present application includes claims 1-35. Claims 1-35 were rejected. Claims 1, 17-18 and 30-31 are amended to recite limitations in response to Examiner's rejection. Claims 12-14 and 25-27 are amended to correct antecedent basis. Claims 11, 24 and 32-35 are canceled.

Claim 1 is amended to recite the limitation of imaging a patient with a low-dose pre-shot to determine a low-dose image, where the imaging step includes imaging the patient with a low-dose X-ray imaging sequence.

Claim 17 is amended to recite the limitation of analyzing a low dose image to determine the positioning of a patient relative to at least one of an X-ray emitter and an X-ray detector, where the analyzing step is automatic using a computer algorithm and the computer algorithm employs image segmentation to determine the positioning of the patient.

Claim 18 is amended to recite the limitation of imaging a patient with a low-dose pre-shot, where the imaging step includes imaging the patient with a low-dose X-ray imaging sequence.

Claim 30 is amended to recite the limitation of verifying the positioning of a patient in an X-ray system, where the verifying step is automatic using a computer algorithm and the computer algorithm employs image segmentation.

Claim 31 is amended to recite the limitation of processing a low-dose image to provide imaging parameters to be employed during a subsequent X-ray exposure, where the imaging parameters include at least one of zero point parameters, saturation management parameters, field of view optimization parameters and spatial physical filter parameters.

Claims 1-6, 18-29 and 31-35 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Klausz, U.S. Patent No. 4,633,494 in view of Smith et al., U.S. Patent No. 6,282,264.

Claims 17 and 30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Klausz and Smith in view of Boyer, U.S. Patent No. 5,295,200.

The Applicant first turns to the rejection of claims 1-6, 18-29 and 31-35 under 35 U.S.C. § 103(a) as being unpatentable over Klausz in view of Smith. Klausz relates to a method of controlling the positioning of a patient with respect to an x-ray device and installation for carrying out such method. Specifically, Klausz describes an x-ray table that moves in correspondence with electrical signals received from an operator (col. 3, lines 24-33). Klausz discloses a system that estimates the centering of an x-ray image given an operator-controlled displacement (i.e. Δx, Δy) of the x-ray table (col. 4, lines 35-68; col. 5, lines 1-2). That is, Klausz describes the decentering of an x-ray image based on operator inputs that displace the position of an x-ray table.

In the November 18, 2003 Office Action, the Examiner stated, and Applicant respectfully agrees, "Klausz does not explicitly disclose however, a method wherein imaging the patient (in step b) utilizes a low dose pre-shot, and subsequently imaging the patient (in step e) with a full dose exposure" (Nov. 18, 2003 Office Action, page 3). Furthermore, Applicant submits that Klausz also fails to teach or suggest imaging a patient with a low-dose X-ray imaging sequence. In other words, as Klausz does not teach or suggest the utilization of a low dose pre-shot, then Klausz is also incapable of teaching or suggesting imaging a patient with a low-dose X-ray imaging sequence, as recited in claims 1 and 18.

Furthermore, Klausz does not teach or suggest processing a low-dose pre-shot image to provide imaging parameters to be employed during a subsequent X-ray exposure, where the imaging parameters include at least one of zero point parameters, saturation management parameters, field of view optimization parameters and spatial physical filter parameters, as recited in claim 31. Conversely, Klausz does not disclose, teach or suggest providing **any** imaging parameters, much less imaging parameters processed from a low-dose pre-shot image. Instead, as described above, Klausz merely discloses the recentering of an existing image, with no modification or processing of the image, based on a displacement of a table (col. 4, lines 35-55). As Klausz does not teach or suggest the processing of an x-ray image, Klausz is therefore incapable of teaching or suggesting processing an image to provide imaging parameters.

Moreover, as stated above, in the November 18, 2003 Office Action, the Examiner stated, and Applicant respectfully agrees, "Klausz does not explicitly disclose however, a method wherein imaging the patient (in step b) utilizes a low dose pre-shot, and subsequently imaging the patient (in step e) with a full dose exposure" (Nov. 18, 2003 Office Action, page 3). As Klausz does not disclose the utilization of a low dose pre-shot, then Klausz is also incapable of teaching or suggesting processing a low-dose pre-shot image to provide imaging parameters to be employed during a subsequent X-ray exposure, where the imaging parameters include at least one of zero point parameters, saturation management parameters, field of view optimization parameters and spatial physical filter parameters, as recited in claim 31.

Thus, the Applicant respectfully submits that Klausz does not teach or suggest the limitations of the claimed invention.

Smith relates to digital flat panel x-ray detector positioning in diagnostic radiology. Specifically, Smith discloses a variety of x-ray imaging systems, in which an image is computer analyzed and the orientation of the imaged body part is determined through image processing means and rotating the image before image storage (col. 15, lines 10-15). In addition, Smith describes a low-dose preview image being analyzed by an operator for proper positioning of the patient, detector and x-ray tube (col. 17, lines 52-61).

However, Smith does not teach or suggest imaging a patient with a low-dose X-ray imaging sequence to determine a low-dose image, as recited in claims 1 and 18. Smith merely describes the ability of the disclosed systems to "perform a low-dose preview image prior to the final full-radiation image" (col. 17, lines 54-55). The preview image of Smith is then "displayed[] and [] analyzed by the operator for proper positioning of the patient, detector, and x-ray tube. If the alignment is adequate, a second full-exposure image is acquired" (col. 17, lines 58-61). Thus, Smith describes a single low-dose preview image and does not teach, suggest or imply the imaging of the patient with a low-dose X-ray imaging sequence.

In addition, Smith does not teach or suggest processing a low-dose pre-shot image to provide imaging parameters to be employed during a subsequent X-ray exposure, where the imaging parameters include at least one of zero point parameters, saturation management parameters, field of view optimization parameters and spatial physical filter parameters, as recited in claim 31. Conversely, Smith does not teach or suggest **any processing of an image to provide any imaging parameters**. Smith instead merely describes an operator analyzing a low-dose scout shot for proper system positioning (col. 17, lines 52-61). Therefore, Smith is incapable of teaching or suggesting the limitations of claim 31.

Thus, the Applicant respectfully submits that Smith does not teach or suggest the limitations of the claimed invention.

Furthermore, assuming for the sake of argument that one would combine Klausz and Smith, the combination would result in an x-ray imaging system where an operator controls the displacement of an x-ray table and a single low-dose x-ray image is re-centered based on the displacement of the x-ray table. Conversely, the combination would not teach or suggest imaging a patient with a low-dose X-ray imaging sequence, as recited in claims 1 and 18. Neither reference, taken alone or in combination, teaches or suggest any sort of imaging sequence, whether with a low-dose X-ray or otherwise. Therefore, the combination of Klausz and Smith does not teach or suggest the limitations of claim 1 or 18.

In addition, the combination of Klausz and Smith does not teach or suggest processing a low-dose pre-shot image to provide imaging parameters to be employed during a subsequent X-ray exposure, wherein the imaging parameters include at least one of zero point parameters, saturation management parameters, field of view optimization parameters and spatial physical filter parameters. Conversely, as described above, both Klausz and Smith are incapable of teaching or suggesting **any** processing of a low-dose image to provide **any** imaging parameters, as recited in claim 31. Therefore, the combination of Klausz and Smith does not teach or suggest the limitations of claim 31.

Thus, the Applicant respectfully submits that the combination of Klausz and Smith does not teach or suggest the limitations of the claimed invention.

The Examiner has also asserted that the limitation of imaging a patient with a low-dose X-ray imaging sequence to determine a low-dose image would be an obvious modification of Klausz (Nov. 18, 2003 Office Action, pages 6-7). However, the Examiner has also admitted "Klausz does not explicitly disclose however, a method wherein imaging the patient (in step b) utilizes a low dose pre-shot, and subsequently imaging the patient (in step e) with a full dose exposure" (Nov. 18, 2003 Office Action, page 3). Therefore, the Examiner has admitted that a claim element is not taught by the prior art, but has proceeded to find the claim element obvious nonetheless. Because of the manner in which the statements are worded, the Applicant is unsure if these statements are intended to constitute Official Notice on the part of the Examiner.

In case the Examiner is taking Official Notice, for example, of facts in the Examiner's personal knowledge rather than the prior art, the Applicant respectfully traverses each of the Examiner's assertions. Under MPEP § 2144.03, the Examiner is now obligated to cite references in support of the Examiner's assertions. Alternatively, if the Examiner's assertions are based on facts within the personal knowledge of the Examiner, the facts must be supported by an affidavit from the Examiner.

More specifically, Applicant respectfully traverses the Examiner's assertions with regard to the Examiner's assertion that "[i]t would have been obvious to further modify the method of Klausz such that it incorporated the above limitations. One would have been motivated to make such a modification so that the system is configured to acquire multiple images of a patient in which ideal positioning can be determined" (Nov. 18

Office Action, pages 6-7). The Examiner's assertion is not well known in the art as evidenced by the cited prior art. If the Examiner's assertion were well known, it would appear in the prior art. However, even after the Examiner's exhausted search, the Examiner has been unable to find any reference teaching the Examiner's assertion. Consequently, it is respectfully submitted that the Examiner's assertion is not commonly known in the art and the Examiner's finding of Official Notice is respectfully traversed.

In addition, the Examiner has also asserted that the limitation of processing a low-dose pre-shot image to provide imaging parameters to be employed during a subsequent X-ray exposure, where the imaging parameters include at least one of zero point parameters, saturation management parameters, field of view optimization parameters and spatial physical filter parameters would have been an obvious modification of Klausz (Nov. 18, 2003 Office Action, page 7). However, the Examiner has also admitted "Klausz as modified does not explicitly disclose a method wherein processing includes zero point parameters, saturation management parameters, field of view parameters or physical filter parameters" (Nov. 18, 2003 Office Action, page 7). Therefore, the Examiner has admitted that a claim element is not taught by the prior art, but has proceeded to find the claim element obvious nonetheless. Because of the manner in which the statements are worded, the Applicant is unsure if these statements are intended to constitute Official Notice on the part of the Examiner.

In case the Examiner is taking Official Notice, for example, of facts in the Examiner's personal knowledge rather than the prior art, the Applicant respectfully traverses each of the Examiner's assertions. Under MPEP § 2144.03, the Examiner is now obligated to cite references in support of the Examiner's assertions. The Examiner's citation to Smith for support of Examiner's assertions is insufficient, as Smith merely describes an x-ray system performing a low-dose preview image prior to a final full-radiation image (col. 17, lines 51-61). Smith does not describe, teach, suggest or even imply the motivation to process a low-dose pre-shot image to provide imaging parameters to be employed during a subsequent X-ray exposure, where the imaging parameters include at least one of zero point parameters, saturation management parameters, field of view optimization parameters and spatial physical filter parameters. Conversely, as described above, Smith does not disclose, teach or suggest **any** processing of any x-ray image to provide **any** imaging parameters.

Alternatively, if the Examiner's assertions are based on facts within the personal knowledge of the Examiner, the facts must be supported by an affidavit from the Examiner.

More specifically, Applicant respectfully traverses the Examiner's assertions with regard to the Examiner's assertion that "one would have been motivated to make such a modification so images are optimized for high quality display, wherein artifacts synonymous with the alteration between varying levels of radiation is minimized as suggested by the Smith et al." (Nov. 18 Office Action, page 7). As described above,

Smith does not teach or suggest the processing of images to provide imaging parameters. Therefore, the Examiner's assertion is not well known in the art as evidenced by the cited prior art. If the Examiner's assertion were well known, it would appear in the prior art. However, even after the Examiner's exhausted search, the Examiner has been unable to find any reference teaching the Examiner's assertion. Consequently, it is respectfully submitted that the Examiner's assertion is not commonly known in the art and the Examiner's finding of Official Notice is respectfully traversed.

The present rejection includes claims 1-6, 18-29 and 31-35. As stated above, claims 24 and 32-35 have been canceled. Applicant respectfully submits that independent claims 1, 18 and 31 are amended to recite limitations not taught or suggested by either Klausz or Smith, alone or in combination. Claims 2-6, 19-23 and 25-29 depend from claims 1 and 18. Consequently, the Applicant respectfully submits that independent claims 1, 18 and 31, and dependent claims 2-6, 19-23 and 25-29, should be allowable.

The Applicant next turns to the rejections of claims 17 and 30 under 35 U.S.C. § 103(a) as being unpatentable over Klausz and Smith in view of Boyer. Boyer relates to a method and apparatus for determining the alignment of an object. Boyer describes comparing a current image to a stored, or reference image, to ensure the proper positioning of doses of radiation for radiotherapy treatment (col. 1, lines 22-31). Specifically, Boyer describes a means of measuring the degree of similarity between two

images by applying a Fast Fourier Transform ("FFT") correlation operation (Abstract; col. 1, lines 23-24; col. 2, lines 45-63; col. 3, lines 11-14; col. 4, lines 61-67; col. 5, lines 9-19). That is, Boyer discloses the utilization of an FFT correlation operation to compare a current image to an image stored in a memory in order to measure a degree of patient alignment with a benchmark reference point (col. 5, lines 8-13).

Boyer does not teach or suggest automatically analyzing or verifying a low-dose image using a computer algorithm, where the computer algorithm employs image segmentation to determine the positioning of the patient, as recited in claims 17 and 30. Conversely, Boyer describes the production, digitization and conversion of a portal image into a two-dimensional FFT array (col. 6, lines 4-6). The processor of Boyer then facilitates a clinical scoring technique for the images by carrying out multidimensional Fourier transformations and image correlations using Fourier transformations in correlation integrals (col. 6, lines 4-55).

Therefore, Boyer is limited to the use of FFT to compare two images, as Boyer does not teach or suggest the use of any other algorithm other than an FFT to compare two images. Consequently, Boyer is incapable of teaching or suggesting analyzing a low dose image to determine the positioning of a patient relative to an X-ray emitter and an X-ray detector, where the analyzing step is automatic using a computer algorithm and the computer algorithm employs image segmentation, as recited in claim 17. Similarly, Boyer is incapable of teaching or suggesting verifying the positioning of a patient in an X-ray system via a low-dose pre-shot image, where the verifying step is automatic using

a computer algorithm and the computer algorithm employs image segmentation, as recited in claim 30.

Thus, the Applicant respectfully submits that Boyer does not teach or suggest the limitations of the claimed invention.

As described above, Klausz relates to a method of controlling the positioning of a patient with respect to an x-ray device and installation for carrying out such method. Smith relates to a digital flat panel x-ray detector positioning in diagnostic radiology. Boyer does not remedy the shortcomings of either Klausz or Smith as discussed above, either alone or in combination. Assuming for the sake of argument that one would combine Klausz, Smith and Boyer, the combination would result in an x-ray system where an operator controls the displacement of an x-ray table, and a low-dose x-ray image is re-centered based on the displacement of the x-ray table and compared to a previous x-ray image stored in a memory. The comparison of the low-dose x-ray image and the image stored in memory would be limited to applying a Fast Fourier Transform to determine the similarity between the two images. Conversely, claim 17 recites analyzing a low dose image to determine the positioning of a patient, where the analyzing step is automatic using a computer algorithm and the computer algorithm employs image segmentation. Similarly, claim 30 recites verifying the positioning of a patient, where the verifying step is automatic using a computer algorithm and the computer algorithm employs image segmentation.

Thus, the Applicant respectfully submits a combination of Klausz, Smith and Boyer does not teach or suggest the limitations of the claimed invention.

The present rejection encompasses claims 17 and 30. The Applicant respectfully submits that claims 17 and 30 are amended to recite additional limitations not taught or suggested by Klausz, Smith or Boyer, alone or in combination. Therefore, Applicant respectfully submits that claims 17 and 30 should be allowable.

As an additional matter, throughout the Office Action the Examiner has made various statements in conjunction with the obviousness rejections without citing support for the statements in any of the prior art or by citing support for the statements in a reference that does not support the Examiner's assertions. Additionally, in several instances, the Examiner admits that a claim element is not shown in the prior art, but proceeds to find the claim element obvious nonetheless. Because of the manner in which the statements are worded, the Applicant is unsure if these statements are intended to constitute Official Notice on the part of the Examiner. In case the Examiner is taking Official Notice, for example, of facts in the Examiner's personal knowledge rather than the prior art, the Applicant respectfully traverses each of the Examiner's assertions. Under MPEP § 2144.03, the Examiner is now obligated to cite references in support of the Examiner's assertions. Alternatively, if the Examiner's assertions are based on facts within the personal knowledge of the Examiner, the facts must be supported by an

affidavit from the Examiner. More specifically, Applicant traverses the Examiner's assertions with regard to the following:

With regard to claims 3-6 and 20, the Examiner admitted Klausz does not explicitly disclose a method wherein low dose pre shots are defined and wherein the imaging parameters are varied between a low dose pre-shot and full dose exposure and varied according to patient size and anatomical view, but then the Examiner stated:

> It would have been obvious to further modify the method of Klausz such that it incorporated the step of defining low dose pre-shots and full exposure and wherein the imaging parameters are varied between low dose pre-shot and full dose exposure. One would have been motivated to make such a modification so that exposure levels can be adjusted to limit the total radiation exposure experienced by a patient. Additionally, it would have been obvious to further modify the disclosed method so that the imaging parameters are selectively alterable between low dose and full dose exposure so that generated images can be used for either positioning or internal analysis purposes as suggested by Smith et al. (column 17, lines 52-61). It is commonly understood that full or regular imaging doses are varied with respect to the intended imaging areas (i.e. thorax vs. abdominal) so that generated images are of high quality, enabling easy identification of elements within the internal structure of a patient.

(Nov. 18, 2003 Office Action, pages 5-6).

Applicant respectfully traverses these assertions by the Examiner. The Examiner's assertions are not well known in the art as evidenced by the cited prior art, for example Klausz, Boyer and Smith. If the Examiner's assertions were well known, they would appear in the prior art. However, even after the Examiner's exhausted search, the Examiner has been unable to find any reference teaching the Examiner's assertions.

Specifically, the Examiner's reliance on Smith is insufficient. That is, Smith does not teach or suggest the alteration of **any** imaging parameters at all. Conversely, Smith merely discloses the utilization of a low-dose preview image so that an operator may analyze the patient and system for proper positioning (col. 17, lines 51-61).

Consequently, it is respectfully submitted that the Examiner's assertions are not commonly known in the art and the Examiner's finding of Official Notice is respectfully traversed.

With regard to claims 7-10 and 21-23, the Examiner admitted Klausz does not explicitly disclose a method wherein the system is controlled by a technician by a remote acquisition console, the system is controlled automatically and wherein low dose pre-shots generate images within one and five seconds (Nov. 18, 2003 Office Action, page 6), but then the Examiner stated:

> It would have been obvious to further modify the method of Klausz such that it incorporated the above limitations. One would have been motivated to make such a modification so that a technician is not exposed to radiation as the system is operated. Additionally, it would have been obvious to modify the method so that the system is capable of automatically carrying out a series of image generations, thereby reducing examination time and radiation exposure to the patient as suggested by Smith et al. (column 17, lines 52-61).

(Nov. 18, 2003 Office Action, page 6).

Applicant respectfully traverses these assertions by the Examiner. The Examiner's assertions are not well known in the art as evidenced by the cited prior art, for example Klausz, Boyer and Smith. If the Examiner's assertions were well known,

they would appear in the prior art. However, even after the Examiner's exhausted search, the Examiner has been unable to find any reference teaching the Examiner's assertions.

Specifically, the Examiner's reliance on Smith is insufficient. As discussed above, Smith does not disclose, teach or suggest a system capable of automatically carrying out a series of image generations. Conversely, as described above, Smith merely discloses the utilization of a low-dose preview image so that an operator may analyze the patient and system for proper positioning (col. 17, lines 51-61). That is, Smith does not disclose the utilization of more than a single low-dose preview image.

Consequently, it is respectfully submitted that the Examiner's assertions are not commonly known in the art and the Examiner's finding of Official Notice is respectfully traversed.

With regard to claims 11-16 and 24-29, the Examiner admitted Klausz does not explicitly disclose a method wherein imaging includes imaging a patient with a low dose X-ray imaging sequence, wherein frames occur at a rate of at least 5 frames per second and the sequences are sub-sampled prior to processing, but then the Examiner stated:

> It would have been obvious to further modify the method of Klausz such that it incorporated the above limitations. One would have been motivated to make such a modification so that the system is configured to acquire multiple images of a patient in which ideal positioning can be determined. A benefit of achieving high frame rates, such as that of at least 5 frames per second is that initial patient setups can be accomplished in a short amount of time thereby reducing the total examination time experienced by a patient. Additionally, it would have been obvious to modify the disclosed method so that multiple image data are collected and optimally arranged, so that system components do not experience "slow down"

> during processing, due to the large amount of information contained in obtained image sets. A benefit of such a modification is that it assists in reducing examination time by enabling data to be quickly analyzed.

(Nov. 18, 2003 Office Action, pages 6-7).

Applicant respectfully traverses these assertions by the Examiner. The Examiner's assertions are not well known in the art as evidenced by the cited prior art, for example Klausz, Smith and Boyer. If the Examiner's assertions were well known, they would appear in the prior art. However, even after the Examiner's exhausted search, the Examiner has been unable to find any reference teaching the Examiner's assertions.

Consequently, it is respectfully submitted that the Examiner's assertions are not commonly known in the art and the Examiner's finding of Official Notice is respectfully traversed.

With regard to claims 7-10 and 21-23, the Examiner admitted Klausz does not explicitly disclose a method wherein a) the system is controlled by a technician from a remote acquisition console b) the system is controlled automatically and c) wherein low dose pre-shots generate images within one and five seconds, but then the Examiner stated:

> It would have been obvious to further modify the method of Klausz such that it incorporated the above limitations. One would have been motivated to make such a modification so that a technician is not exposed to radiation as the system is operated. Additionally, it would have been obvious to modify the method so that the system is capable of automatically carrying out a series of image generations, thereby reducing examination time and radiation exposure to the patient.

Applicant respectfully traverses this assertion by the Examiner. The Examiner's assertion is not well known in the art as evidenced by the cited prior art, for example Klausz, Smith and Boyer. If the Examiner's assertion were well known, it would appear in the prior art. However, even after the Examiner's exhausted search, the Examiner has been unable to find any reference teaching the Examiner's assertion. Consequently, it is respectfully submitted that the Examiner's assertion is not commonly known in the art and the Examiner's finding of Official Notice is respectfully traversed.

With regard to claims 11-16 and 24-29, the Examiner admitted Klausz does not explicitly disclose a method wherein imaging includes imaging a patient with a low dose X-ray imaging sequence, wherein frames occur at a rate of at least 5 frames per second and the sequences are sub-sampled prior to processing, but then the Examiner stated:

> It would have been obvious to further modify the method of Klausz such that it incorporated the above limitations. One would have been motivated to make such a modification so that the system is configured to acquire multiple images of a patient in which ideal positioning can be determined. A benefit of achieving high frame rates, such as that of at least 5 frames per second is that initial patient setups can be accomplished in a short amount of time thereby reducing the total examination time experienced by a patient. Additionally, it would have been obvious to modify the disclosed method so that multiple image data are collected and optimally arranged, so that system components do not experience "slow down" during processing, due to the large amount of information contained in obtained image sets. A benefit of such a modification is that it assists in reducing examination time by enabling data to be quickly analyzed.

Applicant respectfully traverses this assertion by the Examiner. The Examiner's assertion is not well known in the art as evidenced by the cited prior art, for example

Klausz, Smith and Boyer. If the Examiner's assertion were well known, it would appear in the prior art. However, even after the Examiner's exhausted search, the Examiner has been unable to find any reference teaching the Examiner's assertion. Consequently, it is respectfully submitted that the Examiner's assertion is not commonly known in the art and the Examiner's finding of Official Notice is respectfully traversed.

With regard to claims 32-35 (which have been incorporated into claim 31 and canceled), the Examiner admitted Klausz does not explicitly disclose a method wherein processing includes providing zero point parameters, saturation management parameters, field of view parameters or physical filter parameters, but then the Examiner stated:

> It would have been obvious to further modify the method of Klausz such that it incorporated the aforementioned limitations. One would have been motivated to make such a modification so images are optimized for high quality display, wherein artifacts synonymous with the alteration between varying levels of radiation is minimized.

Applicant respectfully traverses this assertion by the Examiner. The Examiner's assertion is not well known in the art as evidenced by the cited prior art, for example Klausz, Smith and Boyer. If the Examiner's assertion were well known, it would appear in the prior art. However, even after the Examiner's exhausted search, the Examiner has been unable to find any reference teaching the Examiner's assertion. Consequently, it is respectfully submitted that the Examiner's assertion is not commonly known in the art and the Examiner's finding of Official Notice is respectfully traversed.

With regard to claims 17 and 30, the Examiner admitted Klausz does not explicitly disclose a method wherein verifying includes automatic verification using a computer algorithm, but then the Examiner stated:

> It would have been obvious to further modify the method of Klausz such that it incorporated automatic verification of pre-shot images using a computer algorithm. One would have been motivated to make such a modification so that an operator is able to obtain ideal patient position information based on processor analysis of ideal settings or recognized image shifts. A benefit of such a modification is that patient positioning can be optimized based on algorithmic calculations for ideal image capture as taught by Boyer (Fig. 1 and abstract, above; see also column 5, lines 9-36).

Applicant respectfully traverses this assertion by the Examiner. The Examiner's assertion is not well known in the art as evidenced by the cited prior art, for example Klausz, Smith and Boyer. If the Examiner's assertion were well known, it would appear in the prior art. However, even after the Examiner's exhausted search, the Examiner has been unable to find any reference teaching the Examiner's assertion. Consequently, it is respectfully submitted that the Examiner's assertion is not commonly known in the art and the Examiner's finding of Official Notice is respectfully traversed.

CONCLUSION

The Applicant submits that the claims of the present invention should be in condition for allowance. If the Examiner has any questions or the Applicant can be of any assistance, the Examiner is invited and encouraged to contact the Applicant at the number below.

The Commissioner is authorized to charge any necessary fees or credit any overpayment to the Deposit Account of GTC, Account No. 070845.

Respectfully submitted,

Date: March 12, 2004

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